(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau

(43) International Publication Date
14 April 2005 (14.04.2005)

PCT

(10) International Publication Number
WO 2005/032344 A2

(51) International Patent Classification[7]: A61B

(21) International Application Number:
PCT/US2004/032096

(22) International Filing Date: 1 October 2004 (01.10.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/508,108 2 October 2003 (02.10.2003) US

(63) Related by continuation (CON) or continuation-in-part (CIP) to earlier application:
US 60/508,108 (CIP)
Filed on 2 October 2003 (02.10.2003)

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(81) Designated States *(unless otherwise indicated, for every kind of national protection available)*: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US (patent), UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States *(unless otherwise indicated, for every kind of regional protection available)*: ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:
— *without international search report and to be republished upon receipt of that report*

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/032344 A2

(54) Title: HUMAN PROSTATE CANCER CELL FACTOR(S) THAT INDUCE STEM CELL COMMITMENT AND OSTEOGENESIS

(57) Abstract: Human prostate cancer (CaP) cells secrete biological activities that recruit cells to differentiate into the osteoblast lineage. Conditioned medium (CM) produced by metastatic human CaP cells (DuCaP and VCaP) induced commitment and differentiation of mesenchymal stem cells (MSC) into osteoblasts. CaP-CM induces cellular condensation into tissue-like aggregates. In turn, these tissue-like aggregates secrete and mineralize a bone matrix, forming bone outside the body (*ex vivo*). Thus, conditioned media and/or proteins isolated therefrom may be used to facilitate bone formation in fracture repair and bone diseases.